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ABSTRACT

This study was conducted to provide information on the educational and employment status of 1976-1980 vocational program completers in Pennsylvania. Results were based on a 59 percent return (2,669 persons) from selected area vocational-technical schools. The data were collected by mail from October 1982 to January 1983. Some of the findings were the following: (1) the unemployment rate for vocational completers was about one-fourth less than the rate for similar age group persons in the state in 1982; (2) about 25 percent of the completers are enrolled or have taken postsecondary training; about half of the training was related to the secondary vocational field of study; (3) most completers were employed close to where they were trained; (4) more than three-fourths of completers employed in their field of training felt their high school vocational programs gave them good to excellent preparation for their current jobs; (5) more than half of the completers were employed in jobs related to their fields of study and one-half of those who are employed in nonrelated jobs held a job in their field at one time; (6) high rates of placement in fields of study were related to extensive on-the-job training and apprenticeship opportunities; and (7) male vocational completers earn about $4,000 more per year than female completers. Graduates recommended strongly that high school programs be strengthened to include more practical job training, better job placement, more cooperative programs, and better counseling before course selection. (Author/KC)

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1976-80 Career Follow-Up of Secondary Vocational Completers in Pennsylvania

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ABSTRACT

The purpose of this study was to provide information on the educational and employment status of 1976-80 vocational program completers.

Results were based on a 59 percent (N = 2,669) return from selected area vocational-technical schools. The data was collected by mail from October 1982 to January 1983.

1. The unemployment rate for vocational completers was 12.9 percent which is about one-fourth less than the 1982 federal employment study (16.2 percent) on Pennsylvania found with a similar age group.

2. About 25 percent of the completers are currently enrolled or have taken postsecondary training. About half of the training was related to the secondary vocational field of study.

3. The completers strongly recommended more practical job training, better job placement, more co-op and better counseling before course selection. Only a few recommended more emphasis on reading, writing and speaking skills.

4. Almost all completers are employed close to where they were trained. Only eight percent went to another state for employment.

5. Over three-fourths of the completers employed in field of training felt their high school vocational program gave them good to excellent preparation for their current job. In addition, almost two-thirds felt they were better prepared in relation to other employees in their work group who did not receive such training.

6. Fifty-three percent of the completers were employed in a job related to field of study.

7. Over half of the 1,004 completers (47%) that are employed in nonrelated jobs indicated that at one time they held a job related to their field of study.

8. The main reasons given for leaving a job related to field of training were: "low earnings," "better job came along" and "too little advancement opportunities."

9. The most pronounced difference between AVTSs with extremely high and low averages of placement in field of study was related to training. It was found that the high group received extensive on-the-job training and apprenticeship opportunities.

10. Eighty-three percent of the employed in field and 19 percent employed out of field have taken postsecondary training/education related to their secondary vocational program.

11. A total of 226 (20%) of the employed in field claimed they were promoted; whereas, only 92 (9%) of the employed out of field made this claim.

12. Male vocational completers earn about $4,000 more per year than female vocational completers.

INTRODUCTION

Under Public Law 94-482 (Vocational Education Act of 1976) the states are required to submit information to a national vocational education data reporting and accounting system. This system requires a comprehensive yearly collection of information on vocational students, program completers and leavers, staff, facilities and expenditures. The yearly results prove to be very useful to administrators, policymakers, planners, instructors, etc., at the federal, state and local levels. However, there seems to be a void with the information when questions are asked about the long-term effects of vocational training. For example, after being in the world of work for five years, what is the likelihood of employment success when considering type of program, race, sex, school, additional training and so forth? Or, does vocational education trap low ability students in programs that prepare them for low paying jobs with little opportunity for advancement?

Answers to these types of questions are not obtainable under the present information system for vocational education in Pennsylvania. Usually when there is a need for the information, the Bureau of Vocational Education will conduct a special study. In the past the BVE has supported many longitudinal studies of vocational completers. In fact, the first major statewide study in the United States on vocational completers was conducted by Walter Arnold in 1969. Other special studies were completed by The Pennsylvania State University, 1972-81; Pennsylvania Department of Education, Vocational Education Management Information System, 1977-78 and 1980; and Lewis, 1977-78 and 1979.

Objectives

The main objective of this study was to determine the educational and employment status of 1976-80 secondary vocational completers from 11 selected AVTSs.

The specific objectives were:

1. To compare completers from schools with high and low placements in field of study.

2. To compare completers employed in and out of field of study and the unemployed.

3. To compare completers by disadvantaged, handicapped, sex and minority.

4. To compare completers by vocational program field of study.

Instrument Development

The first step in developing the instrument to collect data for the objectives was to conduct a search for instruments that had been developed for other longitudinal follow-up studies of secondary completers. The search was conducted by using the services of the Vocational Education Information Network, Educational Resource Information Center and National Center for Research in Vocational Education. The PDE VEMIS follow-up reports for 1971 and 1980 were

very helpful in establishing the scope of the study. In addition, reports by Herr, et al., 1981; Mertens, et al., 1981; and Lewis, 1977; were useful in designing the Career Survey.

A number of rough drafts of the instrument were critically reviewed by a joint committee from the Governor's Office of Policy Development and the BVE. One of the final drafts was field tested on a group of 20 vocational school graduates from the class of 1977 in Schuylkill County AVTS. The final version of the Career Survey was approved by the joint committee in late July 1982. See Appendix A for the letter of instruction.

Sample

The universe for this study was vocational completers that are on the PDE VEMIS memory bank for the years 1976-80 from seven AVTSs with the highest and four with the lowest three-year average for completers employed in field of study. A random sample of 100 completers from each of the 11 AVTSs by year was conducted. The names of the AVTSs in the study can be found in Table 3. Due to low enrollments, missing data, etc., the total number for the sample was 5,092. Table 1 shows the AVTS with the highest and lowest three-year average of completers employed in field of study.

TABLE 1

AVTS WITH BEST AND POOREST THREE-YEAR AVERAGE FOR COMPLETERS EMPLOYED IN FIELD OF STUDY

AVTS	1978-79	1979-80	1980-81	Average
1	66.2	65.9	64.0	65.4
2	66.2	65.9	61.5	64.5
3	68.5	60.8	59.0	62.8
4	64.1	67.2	56.7	62.7
5	63.9	61.5	62.3	62.6
6	64.5	63.7	55.9	61.4
7	60.4	61.3	57.1	59.6
8	37.2	25.0	16.2	26.1
9	37.5	22.2	27.7	29.1
10	34.6	34.1	20.0	29.6
11	33.3	32.0	33.3	32.9

Field Procedures

In September 1982 a letter of instruction and Career Survey were sent to the sample of 5,092 vocational completers from the 11 AVTSs. The letter explained the reason for the survey, due dates and instructions on completing the instrument. A second letter was sent in November 1982 to the ones that did not return the survey. A postage-paid envelope was enclosed for both mailings. The cutoff date for receiving the Career Survey was January 24, 1983.

Quality Control

The instrument was designed to facilitate coding, keypunching and data analyses. The completed instrument was reviewed by at least two staff members from BVE. Detailed instructions were prepared for keypunching. Independent verification of all keypunched information is a standard practice of the Data Processing Center. After raw scores were stored in the computer, editing runs were conducted to determine the variations in the response for each item of the inventory, the extent of omissions and interrelationships with other survey items and the VEMIS files on the total population of vocational completers.

ANALYSIS

Table 2 shows that there was a 59 percent return for the Career Survey. As expected, the return rate by year was greater for the more recent years. There was no attempt made to locate the addresses for the nondeliverables. The actual return rate was calculated by subtracting the nondeliverables from the number mailed. The number of returns was then divided by the adjusted total sample (5,092 - 539 = 4,553; 2,669 ÷ 4,553 = 59%).

TABLE 2

CAREER SURVEY RETURNS

Year	Mailed	Nondeliverable	Returned	Percent
1976	1,018	164	458	54
1977	1,018	133	514	58
1978	1,019	120	451	50
1979	1,019	87	591	63
1980	1,018	35	655	67
Total	5,092	539	2,669	59

The general sample characteristics are presented in Table 3. It seems that E. Bok and Greene County AVTS each had the lowest percent (3%) of the total sample and Admiral Peary AVTS was the highest at 17 percent. Basically, the sample was predominately white males. Only about one percent were handicapped and 13 percent disadvantaged. Co-op made up 10 percent of the sample.

TABLE 3

GENERAL SAMPLE CHARACTERISTICS

General Sample Characteristics	Number	Percent
AVTS		
Berks West	295	11.0
Middle Bucks	290	11.0
Marple	172	6.0
Brownstown	289	11.0
North Montco	278	10.0
E. Bok	78	3.0
Franklin County	264	10.0
A. W. Beattie	309	12.0
Admiral Peary	461	17.0
North Fayette	142	5.0
Greene County	91	3.0
Total	2,669	100.0
Year		
1976	458	17.0
1977	514	19.0
1978	451	17.0
1979	591	22.0
1980	655	25.0
Sex		
Male	1,642	62.0
Female	1,027	38.0
Race		
Native American	5	.2
Black	89	3.0
Asian	3	.1
White	2,563	96.0
Hispanic	9	.3
Disadvantaged		
Disadvantaged	339	13.0
Handicapped		
All types combined	38	1.4
Co-op		
Co-op	264	10.0

In order to address the main objective and the four specific objectives without continuous repetition of the 19 questions on the Career Survey, the following procedures were followed:

1. All 19 questions on the Career Survey were analyzed and the results described for the main objective.

2. Only questions that had major differences were described and highlighted in the analysis for the four specific objectives.

3. All responses on the questions for the analysis by the specific objectives are included in Appendix B.

Main Objective: To determine the educational and employment status of 1976-80 secondary vocational completers from 11 selected AVTSs.

The results found in Table 4 for Questions 1-19 show that for the most part information obtained from the PDE VEMIS data bank on the sample for the study was accurate. The error rate was only about two percent for verification by the respondents on their proper identification, address, school attended, year and program. These errors were primarily caused by misinformation collected from schools, data-entry errors and students transferring into other programs after the data was submitted to VEMIS.

Question 2 indicates that 15 percent of the completers from 1976-80 are currently attending school or further training. In regards to the all important Question 3 on employment, the data shows that 12 percent of the completers indicated that they were unemployed and looking for work at the time of the survey in late 1982. This unemployment rate is about one-fourth less than reported in a federal government study on employment in Pennsylvania for a similar age group. The federal study shows that the 1982 Pennsylvania state average unemployment for the 20-24 age group was 16.2 percent (see Appendix C).

It should be pointed out that the federal and state unemployment rates are computed by combining the number of employed, military and unemployed and then dividing the unemployed figure by the combined total (1,997 + 95 + 312 = 2,404; 312 ÷ 2,404 = 12.9%). For the 1976-80 vocational completers, the unemployment rate would be 12.9 percent. The following are the unemployment rates by year for the completers: 10.71 percent (1976), 10.89 percent (1977), 10.78 percent (1978), 14.79 percent (1979) and 16.07 percent (1980).

On the average, 23 percent of the completers are currently enrolled or have taken postsecondary training--eight percent attended vocational school one year or less, another eight percent attended vocational school two-year associate degree and seven percent a four-year university program. A further inspection on the responses for Question 4 shows that the apprenticeship program accounted for only six percent and OJT was 16 percent. Overall, for Question 5 it was reported that more than half of the program of study for postsecondary training and specific job training was related to the secondary vocational field of study.

TABLE 4

EDUCATION AND EMPLOYMENT STATUS OF 1976-80 VOCATIONAL COMPLETERS

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
1. Did you complete the vocational field of study shown above your name?												
Never enrolled	9	2	12	2	11	2	13	2	4	1	49	2
Yes	438	96	497	97	431	96	566	96	640	98	2,572	97
Quit after half completed	4	1	-	-	2	-	4	1	1	-	11	-
Quit before half completed	-	-	2	-	3	1	1	-	1	-	7	-
Transferred - left vo-ed	4	1	1	-	-	-	4	1	3	-	12	-
Transferred - stayed vo-ed	3	1	2	-	3	1	3	1	3	-	14	1
Total	458	100	514	100	450	100	591	100	652	100	2,665	100
2. What is your current education status?												
Currently attending school	51	11	58	11	65	14	99	17	123	19	396	15
Not currently attending school	407	89	456	89	385	86	491	83	530	81	2,269	85
Total	458	100	514	100	450	100	590	100	653	100	2,665	100
3. What is your current employment status?												
Employed	357	78	397	77	353	78	434	73	456	70	1,997	75
Military	10	2	12	2	11	2	27	5	35	5	95	4
Unemployed	44	10	50	10	44	10	80	14	94	14	312	12
Unemployed - not looking	47	10	55	11	42	9	50	8	69	11	263	10
Total	458	100	514	100	450	100	591	100	654	100	2,667	100

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
4. Since leaving high school, what further training have you taken or currently enrolled in? (multiple response)												
Voc. school one year or less	35	7	43	8	34	7	49	8	44	6	205	7
Voc. sch. two-yr. assoc. degree	37	7	28	5	35	7	41	7	64	9	205	7
Four-year university	32	6	42	8	30	6	41	7	45	7	190	7
Apprenticeship	28	6	33	6	29	6	38	6	32	5	160	6
On-the-job training	92	18	92	17	70	14	89	14	84	12	427	15
CETA program	9	2	12	2	9	2	11	2	16	2	57	2
No further training taken	185	37	209	38	187	39	250	40	291	42	1,122	39
Other	87	17	95	17	90	19	110	17	112	16	494	17
5. My area or program of study for the training checked in item 4 is/was. . .												
Related	115	52	125	49	122	55	151	53	171	57	684	53
Not related	108	48	132	51	101	45	132	47	128	43	601	47
Total	223	100	257	100	223	100	283	100	299	100	1,285	100
6. What changes would you recommend to improve high school vocational education?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Better counseling before course	137	4	128	4	116	4	146	4	133	5	660	4
Better job placement	174	3	184	3	179	2	229	2	270	1	1,036	2
Less academic subjects	17	10	25	10	15	10	29	10	24	10	110	10
More practical job training	192	1	226	1	203	1	276	1	258	2	1,155	1
More emphasis on reading skills	77	6	71	7	68	7	99	7	89	7	404	7
More emphasis on writing skills	69	7	69	8	60	8	82	8	82	9	362	8
More emphasis on speaking skills	79	5	89	5	75	6	104	6	97	6	444	6
Better equipment/facility	63	8	82	6	79	5	132	5	134	4	490	5
More co-op programs	180	2	203	2	160	3	224	3	242	3	1,009	3
Other	55	9	64	9	55	9	76	9	87	8	337	9

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
7. What kind of job do you have? See Table 4A.												
8a. Current related job												
Yes	189	53	208	53	181	51	238	53	274	58	1,090	54
No	166	47	188	47	171	49	207	47	200	42	932	46
Total	355	100	396	100	352	100	445	100	474	100	2,022	100
8b. Current job status												
Entry level	282	79	315	79	283	80	397	89	428	90	1,705	84
Promoted	73	21	82	21	69	20	48	11	46	10	318	16
Total	355	100	397	100	352	100	445	100	474	100	2,023	100
8c. Job status verifiable												
Yes	352	99	389	98	350	99	443	100	473	99	2,007	99
No	3	1	7	2	2	1	2	-	3	1	17	1
Total	355	100	396	100	352	100	445	100	476	100	2,024	100
9. What is your current salary before deductions?												
Under $5,000	7	2	5	2	5	2	9	3	4	1	30	2
$ 5,000 to $ 9,999	41	14	63	19	64	23	120	35	161	46	449	28
$10,000 to $14,999	99	34	130	40	115	40	127	37	137	39	608	38
$15,000 to $19,999	93	32	77	24	67	24	57	17	37	11	331	21
$20,000 to $24,999	36	12	26	8	20	7	21	6	9	3	112	7
$25,000 to $29,999	8	3	16	5	10	4	5	1	1	-	40	3
$30,000 and over	8	3	8	2	3	1	2	1	2	1	23	1
Total	292	100	325	100	284	100	341	100	351	100	1,593	100

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
10. Average salary and hours per week.												
Average salary	$15,428		$14,758		$13,988		$12,225		$10,976		$13,473	
Average hours	40.49		40.15		41.07		40.20		39.72		40.32	
11. Where are you now employed in relation to where you went to high school?												
Same city or township as school	85	23	104	26	99	28	148	32	149	31	585	28
Same county as school	154	42	154	38	147	41	155	34	187	39	797	39
Same region of Pennsylvania	71	20	83	20	74	21	83	18	75	16	386	19
Elsewhere in Pennsylvania	13	4	20	5	11	3	25	5	12	2	81	4
State bordering Pennsylvania	15	4	15	4	7	2	5	1	10	2	52	3
Other state or country	26	7	30	7	22	6	40	9	49	10	167	8
Total	364	100	406	100	360	100	456	100	482	100	2,068	100
12. Why did you take your current job?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
High earnings	147	5	142	6	120	6	129	6	107	6	646	6
Job security	202	2	216	2	171	2	229	2	218	2	1,036	2
Close to home	178	3	185	3	162	3	194	3	189	3	908	3
Excellent benefits	149	4	168	4	140	4	157	4	146	5	760	4
Like to work	240	1	272	1	230	1	280	1	291	1	1,313	1
Fulfills lifelong ambition	62	7	90	7	89	7	89	7	87	7	417	7
Highly qualified	135	6	150	5	135	5	152	5	149	4	721	5
Other	38	8	54	8	45	8	63	8	76	8	276	8
13. Is your current job related to your field of vocational training?												
Yes	192	51	220	54	182	50	245	52	274	55	1,113	53
No	186	49	189	46	185	50	224	48	220	45	1,004	47
Total	378	100	409	100	367	100	469	100	494	100	2,117	100

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
14. How well did your high school vocational program prepare you for your present job?												
Excellent	40	21	48	22	46	25	70	29	79	30	283	26
Good	99	52	107	50	93	51	125	51	138	52	562	51
Fair	44	23	53	25	39	21	44	18	40	15	220	20
Poor	7	4	8	4	4	2	6	2	9	3	34	3
Total	190	100	216	100	182	100	245	100	266	100	1,099	100
15. What type of additional training did you need for your current job?												
Only an orientation	59	33	86	41	83	46	97	39	117	46	437	41
A few days of specialized training	31	17	30	14	20	11	49	21	39	15	169	16
Two weeks of specialized training	14	8	18	9	17	9	14	6	19	7	82	8
Four weeks of specialized training	13	7	16	8	18	10	18	8	28	11	93	9
Extensive training	64	35	61	29	42	23	62	26	54	21	283	27
Total	181	100	211	100	180	100	235	100	257	100	1,064	100
16. As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?												
I was better prepared	118	62	151	70	118	64	159	66	165	62	711	65
I was less prepared	3	2	2	1	3	2	6	2	6	2	20	2
Our preparation was about the same	14	7	19	9	26	14	38	16	50	19	147	13
No basis for comparison	55	29	44	20	36	20	38	16	45	17	218	20
Total	190	100	216	100	183	100	241	100	266	100	1,096	100

Question	1976 N	1976 %	1977 N	1977 %	1978 N	1978 %	1979 N	1979 %	1980 N	1980 %	Totals N	Totals %
17. What were the reasons for not getting your current job in the field you studied at high school vo-tech?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Tried, but could not find job in field	56	2	65	1	61	1	104	1	93	1	379	1
Was not accepted in apprentice program	20	7	18	8	15	8	19	8	21	8	93	8
Did not feel sufficiently qualified	17	8	27	7	28	6	25	7	26	6	123	7
Decided I did not like type of work	38	5	37	4	36	4	36	5	29	5	176	5
Found out that pay was too low	44	3	33	5	33	5	37	4	30	4	177	4
Too little opportunity for advancement	40	4	41	3	38	3	38	3	26	6	183	3
Better type job came along first	60	1	57	2	50	2	66	2	53	2	286	2
Never really planned to do so	9	9	11	9	4	10	13	9	12	9	49	9
Too far to travel	6	10	7	10	8	9	10	10	8	10	39	10
Other	29	6	29	6	25	7	31	6	47	3	161	6
18. Have you ever held a job in the field for which you were trained?												
Yes	124	54	140	59	136	62	152	53	143	48	695	55
No	107	46	96	41	83	38	135	47	158	52	579	45
Total	231	100	236	100	219	100	287	100	301	100	1,274	100
19. Why did you leave the field for which you were trained?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Too little advancement opportunities	49	3	42	4	52	1	52	3	42	3	237	3
Did not like type of work	24	7	25	6	31	6	29	6	25	6	137	6
Low earnings	62	1	60	1	52	1	65	2	53	2	292	1
Difficulty with supervisor	21	8	18	8	17	8	27	7	21	8	104	8
Poor working conditions	25	5	22	7	19	7	25	8	24	7	115	7
Better job came along	59	2	56	2	48	3	67	1	32	5	262	2
Advanced or promoted out of field	7	9	3	12	7	12	7	10	3	12	27	12
Too much overtime work	5	12	7	10	8	9	5	11	9	11	34	11
Personal/family problems	7	9	13	9	8	9	1	12	12	9	41	9
Laid off, lack of work	25	5	34	5	33	5	42	5	37	4	171	5
Laid off, other reasons	7	9	5	11	8	9	10	9	11	10	41	9
Other	34	4	47	3	39	4	50	4	55	1	225	4

Question 6, "What changes would you recommend to improve high school vocational education?," showed that the completers strongly recommended the following: "more practical job training," "better job placement," "more co-op programs" and "better counseling before course." Only about 15 percent recommended more emphasis on reading, writing and speaking skills. For each individual year the completers basically have the same ranking.

The job titles listed by the respondents for the five years on Question 7 (displayed in Table 4A) were given a Standard Occupational Classification number. The SOC is structured on a four-level system: division, major group, minor group and unit group. Each level represents grouping and successively finer detail which enables the user to tabulate or analyze data on different levels of aggregation. All Dictionary of Occupational Titles are included in the classification. Table 4A presents a rank order list of 30 occupations by SOC titles. It seems that auto mechanic, machinist and cosmetologist were the top three occupations listed.

TABLE 4A

7 WHAT KIND OF JOB DO YOU HAVE?

Occupation	N	Occupation	N
Auto Mechanic	106	Auto Body Repairer	32
Machinist	88	Computer Operator	32
Cosmetologist	74	Military	27
Carpenter	70	Plumber	25
Secretary	57	Machine Feeder	25
Welder	57	Retail Supervisor	25
Draftsperson	47	Mechanic	25
Sales Clerk	45	Store Clerk	24
Electrical Technician	44	Power Sewing Operator	22
Electrician	42	Licensed Practical Nurse	22
Nurses Aide	42	Cashier	22
Laborer	42	Designer	21
Cashier	41	Registered Nurse	20
Truck Driver	35	Diesel Mechanic	19
Printer	33	Clerk	19

Questions 8a and 13 were basically the same. In Question 8a the research team made the decision about the relatedness of training to current job according to the duties listed. This process also verified the information for job titles in Question 7. In Question 13 the completer made the decision about the relatedness of training to current job. The results for each question were about the same. In terms of current job status, Question 8b, 84 percent said they were working at entry-level positions. Only a few (16%) enjoyed a promotion in their current job. As expected, the number of years working is directly related to promotion on the job. For Question 8c almost all the job duties listed by the respondents by year were verifiable with the job titles listed in Table 4A.

Question 9 shows the ranges of salaries from under $5,000 to over $30,000 per year for the completers. The total average yearly salary was $13,473. The data reflects what was reported; the years out in the work force are highly related to income level. Question 10 presents the average salary and hours per week. The average work week was very close to the normal 40-hour week.

Basically, the data on Question 11 shows that few completers leave the geographic area in which they were trained. Considering the years 1976-80, in the sample all were out in the labor force for at least two years. The data shows that 85 percent stay close to home, only eight percent said they go on to other states for employment.

In regard to Question 12, "Why did you take your current job?," the number one reason was "like to work" followed by "job security" and "close to home"; "high earnings" and "fulfills lifelong ambition" were considered low on their priority list of major reasons for taking their current job. The ranking by the completers by year was consistent for each recommendation.

A total of 53 percent of the completers from 1976-80 said that their current job was related to their secondary field of vocational training. Of this group, over three-fourths felt their high school vocational program gave them good to excellent preparation for their current related job. The comparison by year shows an 11 percent improvement rating for the completers over the five-year period.

Question 15 was designed to gather information on type of additional training needed for the current job that was related to high school vocational program. The majority (57%) said they only needed an orientation or a few days of specialized training. A total of 38 percent did need extensive training of four weeks or more. This finding also shows an improvement over the five-year period of over 10 percent in the amount of additional training needed for current job. A follow-up to this was Question 16, "As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?" Sixty-five percent of the completers from 1976-80 felt they were better prepared and only two percent felt less prepared. Thirteen percent said that "our preparation was about the same" and the rest (20%) said there was "no basis for comparison." Again, these findings were very consistent over the five-year period.

The last three questions, 17, 18 and 19, were designed for completers that were employed in a job that was not related to their secondary vocational preparation. The results of Question 17 show the top three major reasons for not getting a job in field of study: "tried, but could not find job in field," "better type job came along first" and "too little opportunity for advancement." "Too far to travel" and "never really planned to do so" were not considered major reasons. The ranking by year remained basically the same as the total ranking. It was indicated by this group of completers from 1976-80 that 56 percent did hold a job at one time that was related to their field of study at the AVTS. It should be noted that there was a range of 14 percent over the five-year period for holding a job in field of study. The last question asks why they left jobs that were related to their training. The main reasons given were: "low earnings," "better job came along," "too little advancement opportunities" and "laid off, lack of work."

Objective 1: To compare completers from schools with high and low placements in field of study.

As noted in the sample section, the universe for this study was vocational completers that are on the VEMIS memory bank for the years 1976-80 from seven AVTSs with the highest and four with the lowest three-year average for completers employed in field of study. This was done in order to assure that there would be an adequate sample of completers from schools with extreme averages.

Inspection of Table 5 (see Appendix B) shows that there were only a few differences in the responses by the completers from the high and low AVTSs.

For Question 4, "Since leaving high school, what further training have you taken or currently enrolled in?," the following major differences were found with: "apprenticeship," "on-the-job training" and "no further training taken." It seems that more of the completers from the high group did further their education/training. The most pronounced difference was "on-the-job training." A total of 193 (22%) of the completers from the high group and only 26 (12%) from the low group received "on-the-job training." Related to this finding was Question 15, "What type of additional training did you need for your current job?" Over 25 percent of the completers from the high group indicated that they received extensive training for their current job and only five percent from the low group indicated the same. In terms of salary differences, it was found that 42 percent of the low group earned under $10,000 as compared to 26 percent for the high group. The overall yearly salary averages for the two groups were within $600 of each other. Finally, there were minor differences between groups for every work location. The widest margin was with "same county as school." Overall, 88 percent of the high and 82 percent of the low group "stay close to home."

Objective 2: To compare completers employed in and out of field of study and the unemployed.

Table 6 (see Appendix B) presents the comparisons of the responses on the Career Survey by completers employed in and out of field and the unemployed. In Question 4 it was found that the unemployed have taken more four-year university training than both groups of employed. A major difference was found in Question 5. It seems that the vast majority (83%) of the employed in field have taken postsecondary and job training related to field of study. It was reported that only 19 percent of the employed out of field had related postsecondary training/education. All three groups of completers highly recommended in Question 6: "more practical job training," "better job placement" and "more co-op programs." The employed in field seem to have a better chance for promotion based on the responses for Question 8b. A total of 226 (20%) of the employed in field claimed they were promoted; whereas, only 92 (9%) of the employed out of field made this claim. The mobility patterns of employed in and out of field were basically the same. About 85 percent were close to home or in the same region in which they went to high school.

Questions 14, 15 and 16 were designed for responses for only the employed in field. It was reported that 75 percent of the completers employed in field considered their high school vocational preparation good to excellent. Only five percent said it was fair to poor. Related to this, 63 percent of the completers said they were better prepared for their work than other employees in their work group that did not receive such training.

Questions 17, 18 and 19 were designed for responses by the completers employed out of field. The number one reason for not getting a job was "tried, but could not find job in field" followed by "better type job came along first." Of this group, 50 percent said they did hold a job in the field for which they were trained. The main reasons given for leaving the field found in Question 19 were: "low earnings," "better job came along" and "too little advancement opportunities."

Objective 3: To compare completers by disadvantaged, handicapped, sex and minority.

Table 7 found in Appendix B shows the results of the comparisons among five subgroups of completers. It should be noted that 85 percent of the minority subgroups were Black and 66 percent were from E. Bok AVTS located in Philadelphia.

The unemployment status reported in Question 3 varied by as much as 28 percentage points with the minority group being the highest at 38.9 percent. Unfortunately, the data that was available on Blacks and minority unemployment in Pennsylvania was not broken out for the 20-24 age group. Table 7 (Appendix B) shows the total unemployment rate at 22.9 percent for Black adult males. In Question 4, the training after high school varied greatly. Females were the least likely to attend postsecondary training/education. Only 15 percent of the females reported that they attend or have attended postsecondary training compared to 47 percent for minority and 25 percent for disadvantaged and males. However, as reported in Question 5, females (56%) did better than males (52%) in taking further training related to their high school vocational program of study. The handicapped reported 68 percent in this category. In almost direct contrast, only 32 percent of the minority enrolled in related training.

The salaries for the handicapped in Questions 9 and 10 were not reported because of the small sample and the high percentage of no responses. There was reported a rather drastic difference with the salary ranges and average income of the subgroups. Half of the females earn under $10,000 a year. For this salary range, the males reported 21 percent; disadvantaged, 34 percent; and minority, 44 percent. Males earn over $4,000 more per year than females and about $2,000 more than the disadvantaged group.

A very interesting finding was discovered with the minority group in their recommendation for Question 6, "What changes would you recommend to improve high school vocational education?" They were in agreement with the other subgroups on "more practical job training" and "better job placement"; however, they ranked more emphasis on basic reading, writing and speaking skills considerably higher. In regard to current job status, Question 8b, females were more likely to be promoted than the other subgroups.

Females and handicapped had less of a tendency to relocate for employment than the minority, disadvantaged or males. Over three-fourths of the handicapped are employed in a job that is related to their field of study at vo-tech as compared to 38 percent for minority and 48 percent for disadvantaged. Minority gave the highest ratings for their high school preparation for current job as reported in Question 14. An inspection of Question 5 revealed that the handicapped were the best prepared of the subgroups for their current job. Further, they had a higher regard than the others for their preparation for current job as reported in Question 16. All the subgroups were in agreement on the two main reasons for not getting a job related to the high school vocational program.

Objective 4: To compare completers by vocational program field of study.

In order to further explain the educational and employment status of the completers, the data was analyzed by vocational program area. Table 8 found in Appendix B presents the results for each question on the Career Survey by program area.

Question 3 elicited responses on the completers' current employment status. The results show that the unemployment rates range from 6.5 percent for Business program completers to 15.7 percent for Agriculture program completers with the overall rate being 12.9 percent. These figures are based on the U.S. Government formula explained in the analysis for the main objective on page . It was found in Question 4 that the Technical program completers led in the amount of further training since leaving high school. In regard to the relatedness of training to the high school program of study, it was found that the Health program completers led in this category (65%) followed by the Technical program completers at 63 percent.

Overall, the completers' responses by program area on the recommendations for improving high school vocational education in Question 6 were consistent except for some minor ranking order differences with the Business completers.

The results of job status by program area found in Question 8b had some variability that should be noted. The range went from nine percent for Business completers to 24 percent for Health completers. The most frequent salary range for the programs was $10,000 to $14,999, except for Home Economics and Marketing and Distribution which experienced the most frequent salary range at $5,000 to $9,999. On the average yearly salary as reported in Question 10, the Technical program completers were the highest paid followed by Trade and Industrial. The lowest were Agriculture followed by Marketing and Distribution vocational completers. The average hours worked per week were very consistent by program area.

It was found in Question 11 that the Technical completers are more apt to relocate for employment than any other program completer. Further, it was reported that 95 percent of the Business completers are employed close to where they went to high school. The reason for taking the current job was basically the same for all program areas as reported in Question 12. Question 13 showed that there was a rather wide spread by program area for current job related vocational training at the high school. It was found that 25 percent of the vocational Agriculture completers and 62 percent of the Business completers find employment related to their high school vocational program of study.

Questions 14, 15 and 16 were designed for responses by only the employed in field of study at high school. The Business and Health completers led in praise for high school vocational preparation for their current job 91 percent and 87 percent, respectively. It was reported in Question 15 that 80 percent of the Home Economics and 78 percent of the Marketing and Distribution completers only needed an orientation or a fews days of additional training for their current related job. In regard to extensive training, the Health and Technical completers led in the category. The highest rating in Question 16 was reported for the Health completers (78%) followed by Home Economics (76%). Overall, two-thirds of the completers felt they were better trained than other employees in their work group.

Questions 17, 18 and 19 were designed for reponses by the completers employed out of field. The results for Question 17 were rather consistent across all program areas. The number one reason listed was "tried, but could not find job in field" followed by "better type job came along first." In comparing results in Question 18, it was found that 70 percent of the Home Economics completers held a job in the field for which they were trained. They were followed by the Marketing and Distribution completers (68%). Overall, 56 percent of the completers from all the program areas worked in the field for which they were trained. The results for Question 19, "Why did you leave the field for which you were trained?," were consistent across all program areas.

IMPLICATIONS

The implications and recommendations must be tempered to some extent because the selection of AVTSs for this study was based on the high and low percent of completers employed in field of study rather than by a completely random process. The selection of completers by year from each of the 11 AVTSs, however, was by a random process.

The findings have several interesting policy implications for vocational education in Pennsylvania. They clearly point out in a number of ways that vocational education does provide a viable service to students, business/industry and the community. The excellent employment averages, extensive postsecondary education and training, competitive salaries and positive perceptions of training received all show that vocational education is adequately fulfilling its mission in Pennsylvania.

The excellent response to the Career Survey from completers out of school three to seven years is a very positive, unobtrusive indication of how appreciative they are of their training received at the vocational school. One of the most important findings of the entire study was the fact that a vocational completer is more likely to be employed than a nonvocational completer. In regard to the quality of the vocational training, over three-fourths of the completers employed in field of training felt their high school vocational program gave them a good preparation for their current job. Further, two-thirds felt they were better prepared in relation to other employees in their work group that did not receive such training.

RECOMMENDATIONS

1. Provide more coordinated education/training programs. The results of the Career Survey show that many vocational completers are continuing their education/training. However, only about half of the completers continue in their field of study taken in high school. In addition, the study found that most completers find jobs in the same region where they went to high school. These findings present a real need for secondary and postsecondary education together with business and industry to develop more coordinated programs so a student or incumbent worker is able to further his/her skill in his/her field of study.

2. Provide more practical job training, better job placement and career counseling and more co-op. Vocational completers out in the work force from three to seven years strongly recommended that their alma mater provide more practical job training, better job placement and career counseling and more co-op. The competency-based vocational education program that is presently being implemented in Pennsylvania is an excellent way of ensuring the student, employer, taxpayer and the training institution that the job skills required at the vocational school are indeed salable for the job market. As more and more vocational schools adopt competency-based vocational education, the match up with education/training and employment should become more evident.

   Job placement has always been a priority with vocational education. Some vocational schools enjoy a very favorable job market; whereas others can place only about 20 percent of the completers. Overall, as this study found, the unemployment rate for vocational completers was 12.9 percent which is about one-fourth less than the 1982 federal employment study on Pennsylvania found with a similar age group. These findings also hold true for the vocational completers classified as handicapped and disadvantaged. Vocational schools that have low placements should consider establishing a school job placement office, developing cooperative agreements with employment agencies and offering job-seeking training to all students.

   Results of the survey were very consistent in showing that vocational students need more career counseling. Only about half said they continue their education/training in the field of study at vo-tech. This finding is especially true for the disadvantaged and minority completers. Another major finding revealed that female vocational completers earn about $4,000 less than their male counterparts. Inspection of the occupations they pursue at vo-tech clearly shows that they enroll in predominantly low paying and semiskilled occupational fields; whereas, males select training in higher level skills and technical fields. Career counseling at the middle and high schools must be increased. Career counselors must make the students more aware of labor and market conditions, lifestyles of different occupations, advancement opportunities and further training opportunities.

Co-op is probably the most successful component of vocational education. These industrial experiences are very profitable to the student in acquiring specialized job skills and often leads to full employment. There is, however, the drawback of losing training stations, especially for schools that have difficulty in making cooperative training experiences with business and industry. Increasing co-op should carefully be considered for some schools. The following alternatives that were gleaned from the Pennsylvania Bureau of Vocational Education-sponsored programs at The Pennsylvania State University and Fulton, Clearfield and Schuylkill counties coordinated co-op programs may be helpful:

- Develop a program for consultants from business and industry to teach some specific skills at the vocational school.
- Establish joint trainee programs in which workers from industry and students are trained together with the latest equipment in the vocational school.
- Borrow equipment from industry and use it as a training station.
- Use volunteers that are recently retired from business and industry. Their skills are usually current and in many cases a retired employee will teach just as a public service.

3. Require more prerequisites for vocational programs. Vocational education seems to be in a dilemma. It was found in the most recent PDE EQA testing of 11th grade vocational students that they are about 20 percent lower than their counterparts in the academic high schools for basic skills achievement. This alarming finding has made basic skill improvement a top priority for vocational education. The PDE has put this priority in all of the long-range plans for vocational schools as well as for all school districts in Pennsylvania. The recently adopted State Board of Education Curriculum Regulations will certainly be a driving force for all schools to improve the quality of instruction.

The Career Survey found that vocational education completers ages 20-24 that are out in the work force recommended that they want more practical job skills, more co-op and not more basic skill training. This situation has put vocational education into a predicament. A possible solution would be to require more prerequisites for vocational education programs. This will enable students that are of low academic ability to zero in on what basic skills they need in order to obtain a job competency. This is much better than a shotgun approach by just giving low ability students more basic skill training. If the training was based on prerequisites, it would be more effective because the student would see the relevancy of the instruction. Attainment of prerequisites for specific job competencies is easy to do because of the competency-based vocational education program that is in its fifth year of operation in many of the vocational schools in Pennsylvania. One of the foundations of this system is based on prerequisite identification.

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GLOSSARY

APPRENTICESHIP - A preparatory student who is enrolled in a registered or unregistered apprenticeship program leading to journeyman status involving on-the-job training and in-school instruction.

AREA VOCATIONAL-TECHNICAL SCHOOL (AVTS) - A specialized high school used principally for providing vocational education.

COMPETENCY-BASED VOCATIONAL EDUCATION - CBVE is an instructional system based on occupational analysis and clearly stated performance objectives that lead to the development of competencies--knowledge, skills and attitudes that are deemed critical to successful employment in the work environment.

COMPLETERS - A student who finisned a planned sequence of courses, services or activities designed to meet a vocational occupational objective.

CO-OP - A cooperative education activity is a method of providing on-the-job experiences in a vocational education curriculum. Through written arrangement between the school and employer, the student is employed and receives compensation, and also receives instruction, including required academic courses and related vocational instruction by alteration of study in school with job in any occupational field.

DISADVANTAGED - A student who is either academically or economically disadvantaged.

HANDICAPPED - A student evaluated as being deaf, deaf/blind, hard of hearing, mentally retarded, orthopedically impaired, seriously emotionally disturbed, specific learning disabled, speech impaired, visually handicapped or other health impaired who because of those impairments needs special education and related services.

MINORITIES - Includes all persons classified as Black (not of Hispanic origin) Hispanic, Asian or Pacific Islanders and American Indians or Alaskan Natives.

PENNSYLVANIA'S EDUCATIONAL QUALITY ASSESSMENT - The EQA program is a comprehensive approach to the assessment of education. It is designed to provide pertinent information to school decisionmakers about basic skills achievement as well as about personal and social development of students. The EQA program collects data from 5th, 8th and 11th grade students. These data are scored and the results are presented by school building. The school report does not include individual student data. In the report, the school's average score, percentile rank and "predicted score range" are given for each area measured. The "predicted score range" is an estimate of how the school could be expected to score based on a variety of home, school and community resources. In addition, responses to all student items are provided and distributions of scores are included.

SECONDARY - A vocational education program offered in public secondary schools, intermediate units and correctional institutions to students in grades 9 through 12 (including upgraded students in the age bracket of grades 9 through 12).

POSTSECONDARY - A vocational education program offered in higher education institutions that are legally authorized to grant degrees and that are included in the Pennsylvania State Plan for Vocational Education. This includes community colleges, The Pennsylvania State University and 11 other institutions.

VOCATIONAL EDUCATION MANAGEMENT INFORMATION SYSTEM (VEMIS) - This is a state data collection system for vocational education. The information collected is required by law for state and federal reporting.

VOCATIONAL EDUCATION - Programs under public supervision and control which provide organized learning experiences designed to develop skills, knowledge, attitudes and work habits in order to prepare individuals for entrance into and progress within various levels of employment in occupational fields including agriculture, business, distribution, health, occupational and useful home economics, trades and industry and an alternative recognized program known as diversified occupations. More specifically:

Agriculture Education - Education designed to prepare an individual to enter or advance in production agriculture, products processing, agribusiness, renewable natural resources, agricultural mechanics, horticulture and environmental occupations.

Business Education - Education designed to prepare an individual to enter or advance in an occupational field wherein success is largely dependent upon skills, knowledge, attitudes, work habits and leadership development necessary to demonstrate competency in accounting, clerical, data processing, secretarial occupations and similar business pursuits.

Health Occupations Education - Prepares individuals with entry-level skills through a program of basic related subjects, principles, concepts and a common core of knowledge for a variety of occupations to render the person employable in settings that are concerned with providing diagnostic, therapeutic, preventative, restorative and rehabilitative services to people. The educational program provides vocational and technical training for in-school youth and out-of-school adults through a cooperative arrangement with the health care providers.

Home Economics Education - The total program of offerings which is composed of one or both types of instructional programs--Consumer and Homemaking Education and Occupational Home Economics Education. Both programs use the knowledge, skills and attitudes in the subject matter areas of home economics. These areas include: foods and nutrition, clothing and textiles, housing and home furnishings, human development including child care and development, parenthood education and family living, home management and family resources.

Consumer and Homemaking Education - The instructional program which prepares persons at the high school and adult educational levels for homemaking.

Occupational Home Economics Education - The instructional program which prepares persons at the high school and adult educational levels for paid employment.

Marketing and Distributive Education - Education designed to meet the needs of persons preparing to enter or retrain for an occupation requiring competency in one or more of the functions of marketing and distribution and/or knowledge of products and services.

Trade and Industrial Education - Education designed to develop manipulative skills and leadership abilities, acquire technical knowledge and related occupational information for preparing individuals for initial employment or upgrading and retraining out-of-school youth and adult workers in the service, manufacturing, trade and industrial occupations.

Technical Education - A vocational education program designed to prepare an individual to enter or advance in an occupational field requiring use of technical skills or laboratory techniques the practice of which involves application of scientific principals, supporting mathematics, management principals and technical information.

APPENDIX A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
333 MARKET STREET
P. O. BOX 911
HARRISBURG, PA 17108

September 30, 1982

Dear Graduate:

The Pennsylvania Department of Education is interested in learning about your progress since leaving high school. Enclosed is a Career Survey that we designed to collect information about your high school education and your experiences since leaving high school. Hopefully, your information will provide directions for improving vocational education in Pennsylvania.

All information is strictly confidential. The surveys are destroyed once the answers have been tallied. Your name will never be associated with the information you give.

Most of the questions can be answered by putting a checkmark in the space that best reflects your own experience. The small numbers on the left side of the survey are for computer use in tallying your answers. You do not have to pay any attention to them.

Please try to complete and return the survey today. The return envelope requires no postage.

Sincerely yours,

James P. Lewis

James P. Lewis
Educational Research Associate
Bureau of Vocational Education

JL/mh4007a

Enclosures

EVERY SCHOOL A GOOD SCHOOL

APPENDIX B

TABLE 5

AVTS WITH HIGH AND LOW PLACEMENTS IN FIELD OF STUDY

Question	High N	High %	Low N	Low %
3. What is your current employment status?				
Employed	868	98	209	96
Military	22	2	8	4
Unemployed	-	-	-	-
Unemployed - not looking	-	-	-	-
Total	890	100	217	100
4. Since leaving high school, what further training have you taken or currently enrolled in? (multiple response)				
Vocational school one year or less	71	7	17	7
Vocational school two-year associate degree	74	8	20	9
Four-year university	51	5	8	3
Apprenticeship	88	9	16	7
On-the-job training	193	20	26	11
CETA program	4	-	3	1
No further training taken	325	33	107	46
Other	172	18	36	15
5. My area or program of study for the training checked in item 4 is/was. . .				
Related	434	83	88	82
Not related	91	17	19	18
Total	525	100	107	100

Question	High N	High %	Low N	Low %
6. What changes would you recommend to improve high school vocational education?	N	Rank	N	Rank
Better counseling before course	203	4	50	5
Better job placement	228	3	80	3
Less academic subjects	31	10	8	10
More practical job training	398	1	110	1
More emphasis on reading skills	117	8	44	6
More emphasis on writing skills	111	9	37	9
More emphasis on speaking skills	153	6	42	7
Better equipment/facility	180	5	53	4
More co-op programs	300	2	85	2
Other	140	7	39	8
7. What kind of job do you have? See Table 4A.				
8a. Current related job				
Yes	855	97	205	95
No	25	3	11	5
Total	880	100	216	100
8b. Current job status				
Entry level	687	78	183	85
Promoted	193	22	33	15
Total	880	100	216	100
8c. Job status verifiable				
Yes	871	99	216	99
No	9	1	3	1
Total	880	100	219	100

Question	High N	High %	Low N	Low %
9. What is your current salary before deductions?				
Under $5,000	8	1	6	2
$ 5,000 to $ 9,999	306	25	150	39
$10,000 to $14,999	495	41	121	32
$15,000 to $19,999	285	23	50	13
$20,000 to $24,999	84	7	31	8
$25,000 to $29,999	26	2	16	4
$30,000 and over	15	1	8	2
Total	1,219	100	382	100
10. Average salary and hours per week.				
Average salary		$13,626		$13,089
Average hours		40.38		40.21
11. Where are you now employed in relation to where you went to high school?				
Same city or township as school	244	28	69	32
Same county as school	393	45	64	30
Same region of Pennsylvania	151	17	43	20
Elsewhere in Pennsylvania	26	3	12	6
State bordering Pennsylvania	25	3	8	4
Other state or country	43	5	20	9
Total	882	100	216	100

Question	High		Low	
	N	%	N	%
12. Why did you take your current job?	N	Rank	N	Rank
High earnings	282	6	64	6
Job security	468	2	170	1
Close to home	389	4	110	3
Excellent benefits	316	5	80	5
Like to work	697	1	159	2
Fulfills lifelong ambition	234	7	63	7
Highly qualified	422	3	103	4
Other	111	8	20	8
13. Is your current job related to your field of vocational training?				
Yes	891	100	217	100
No	-	-	-	-
Total	891	100	217	100
14. How well did your high school vocational program prepare you for your present job?				
Excellent	218	25	61	29
Good	452	52	106	50
Fair	179	21	35	17
Poor	21	2	10	5
Total	870	100	212	100

Question	High N	High %	Low N	Low %
15. What type of additional training did you need for your current job?				
Only an orientation	337	40	96	46
A few days of specialized training	129	15	39	19
Two weeks of specialized training	64	8	16	8
Four weeks of specialized training	80	9	11	5
Extensive training	233	28	47	22
Total	843	100	209	100
16. As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?				
I was better prepared	558	65	142	67
I was less prepared	15	2	5	2
Our preparation was about the same	118	14	25	12
No basis for comparison	174	20	39	18
Total	865	100	211	100

TABLE 6

COMPLETERS EMPLOYED IN AND OUT OF FIELD OF STUDY AND THE UNEMPLOYED

Question	Employed In Field		Employed Out of Field		Unemployed & Not Looking for Work	
	N	%	N	%	N	%
3. What is your current employment status?						
Employed	1,077	97	917	94	-	-
Military	30	3	59	6	-	-
Unemployed	-	-	-	-	312	54
Unemployed - not looking	-	-	-	-	263	46
Total	1,107	100	976	100	575	100
4. Since leaving high school, what further training have you taken or currently enrolled in? (multiple response)						
Vocational school one year or less	88	7	78	8	38	6
Vocational school two-year associate degree	94	8	56	5	55	9
Four-year university	59	5	54	5	76	13
Apprenticeship	104	9	41	4	15	2
On-the-job training	219	18	149	14	58	10
CETA program	7	1	26	3	24	4
No further training taken	432	36	417	40	273	45
Other	208	17	218	21	66	11

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
5. My area or program of study for the training checked in item 4 is/was. . .						
Related	522	83	100	19	59	45
Not related	110	17	417	81	71	55
Total	632	100	517	100	130	100
6. What changes would you recommend to improve high school vocational education?	N	Rank	N	Rank	N	Rank
Better counseling before course	253	4	268	4	139	4
Better job placement	308	3	431	1	294	1
Less academic subjects	39	10	40	10	31	10
More practical job training	508	1	384	2	260	2
More emphasis on reading skills	161	8	149	5	94	7
More emphasis on writing skills	148	9	145	7	85	8
More emphasis on speaking skills	195	6	148	6	100	6
Better equipment/facility	233	5	142	8	114	5
More co-op programs	385	2	383	3	241	3
Other	179	7	94	9	64	9
7. What kind of job do you have? See Table 4a.						
8a. Current related job						
Yes	1,060	97	8	1		
No	36	3	910	99		
Total	1,096	100	918	100		

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
8b. Current job status						
Entry level	870	79	827	90		
Promoted	226	21	92	10		
Total	1,096	100	919	100		
8c. Job status verifiable						
Yes	1,087	99	910	99		
No	9	1	8	1		
Total	1,096	100	918	100		
9. What is your current salary before deductions?						
Under $5,000	12	1	17	2		
$ 5,000 to $ 9,999	198	23	239	34		
$10,000 to $14,999	347	40	243	35		
$15,000 to $19,999	200	23	125	18		
$20,000 to $24,999	67	8	44	6		
$25,000 to $29,999	22	3	18	3		
$30,000 and over	12	1	10	1		
Total	858	100	696	100		
10. Average salary and hours per week.						
Average salary	$13,884		$12,811			
Average hours	40.28		40.31			

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
11. Where are you now employed in relation to where you went to high school?						
Same city or township as school	313	29	271	28		
Same county as school	457	42	338	35		
Same region of Pennsylvania	194	18	192	20		
Elsewhere in Pennsylvania	38	3	43	4		
State bordering Pennsylvania	33	3	19	2		
Other state or country	63	6	103	11		
Total	1,098	100	966	100		
12. Why did you take your current job?	N	Rank	N	Rank		
High earnings	346	6	297	5		
Job security	578	2	457	1		
Close to home	499	4	406	3		
Excellent benefits	396	5	362	4		
Like the work	856	1	453	2		
Fulfills lifelong ambition	297	7	118	8		
Highly qualified	525	3	196	6		
Other	131	8	147	7		

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
13. Is your current job related to your field of vocational training?						
Yes	1,060	97				
No	29	3				
Total	1,089	100				
14. How well did your high school vocational program prepare you for your present job?						
Excellent	279	26				
Good	558	52				
Fair	214	20				
Poor	31	3				
Total	1,082	100				
15. What type of additional training did you need for your current job?						
Only an orientation	433	41				
A few days of specialized training	168	16				
Two weeks of specialized training	80	8				
Four weeks of specialized training	91	9				
Extensive training	280	27				
Total	1,052	100				

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
16. As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?						
I was better prepared	700	65				
I was less prepared	20	2				
Our preparation was about the same	143	13				
No basis for comparison	213	20				
Total	1,076	100				

17. What were the reasons for not getting your current job in the field you studied at high school vo-tech?	N	Rank
Tried, but could not find job in field	320	1
Was not accepted in apprentice program	80	8
Did not feel sufficiently qualified	101	7
Decided I did not like type of work	161	4
Found out that pay was too low	154	5
Too little opportunity for advancement	165	3
Better type job came along first	258	2
Never really planned to do so	42	9
Too far to travel	32	10
Other	142	6

Question	Employed In Field N	Employed In Field %	Employed Out of Field N	Employed Out of Field %	Unemployed & Not Looking for Work N	Unemployed & Not Looking for Work %
18. Have you ever held a job in the field for which you were trained?						
Yes			488	54		
No			413	46		
Total			901	100		
19. Why did you leave the field for which you were trained?			N	Rank		
Too little advancement opportunities			193	3		
Did not like type of work			119	5		
Low earnings			229	1		
Difficulty with supervisor			80	8		
Poor working conditions			93	7		
Better job came along			228	2		
Advanced or promoted out of field			24	10		
Too much overtime work			23	11		
Personal/family problems			22	12		
Laid off, lack of work			114	6		
Laid off, other reasons			29	9		
Other			155	4		

TABLE 7

COMPARISON BY DISADVANTAGED, HANDICAPPED, SEX AND MINORITY

Question	Disadvantaged N	Disadvantaged %	Handicapped N	Handicapped %	Male N	Male %	Female N	Female %	Minority N	Minority %
3. What is your current employment status?										
Employed	227	67	69	88	1,259	77	738	72	49	54
Military	20	6	1	1	87	5	8	1	6	7
Unemployed	65	19	5	6	202	12	110	11	35	39
Unemployed - not looking	26	8	3	4	92	6	171	17	-	-
Total	338	100	78	100	1,640	100	1,027	100	90	100
4. Since leaving high school, what further training have you taken or currently enrolled in? (multiple response)										
Vocational school one year or less	29	8	1	3	114	6	91	8	8	7
Vocational school two-year associate degree	27	7	4	11	145	8	60	6	18	15
Four-year university	18	5	1	3	117	7	73	7	21	18
Apprenticeship	23	6	-	-	148	8	12	1	3	3
On-the-job training	46	13	7	18	285	16	142	13	15	13
CETA program	12	3	1	3	30	2	27	2	7	6
No further training taken	154	42	17	45	632	36	490	45	22	18
Other	56	15	7	18	303	17	191	18	25	21
5. My area or program of study for the training checked in item 4 is/was. . .										
Related	63	45	13	68	434	52	250	56	17	32
Not related	77	55	6	32	405	48	196	44	36	68
Total	140	100	19	100	839	100	446	100	53	100

Question	Disadvantaged N	Disadvantaged %	Handicapped N	Handicapped %	Male N	Male %	Female N	Female %	Minority N	Minority %
6. What changes would you recommend to improve high school vocational education?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Better counseling before course	97	4	6	5	381	4	279	4	45	5
Better job placement	135	2	12	2	544	3	492	1	59	1
Less academic subjects	17	10	-	-	77	10	33	10	8	10
More practical job training	160	1	13	1	711	1	444	2	55	2
More emphasis on reading skills	61	6	6	5	262	6	142	7	47	3
More emphasis on writing skills	51	8	6	5	221	9	141	8	46	4
More emphasis on speaking skills	60	7	8	4	230	7	214	5	45	5
Better equipment/facility	76	5	6	5	317	5	173	6	35	8
More co-op programs	132	3	12	2	593	2	416	3	44	7
Other	44	9	6	5	227	8	110	9	12	9
7. What kind of job do you have? See Table 7A, B, C and D.										
8a. Current related job										
Yes	115	48	17	59	708	54	382	53	19	35
No	125	52	12	41	594	46	338	47	35	65
Total	240	100	29	100	1,302	100	720	100	54	100
8b. Current job status										
Entry level	215	90	25	86	1,110	85	595	83	49	91
Promoted	25	10	4	14	193	15	125	17	5	9
Total	240	100	29	100	1,303	100	720	100	54	100
8c. Job status verifiable										
Yes	239	100	29	100	1,287	99	718	100	53	98
No	1	-	-	-	15	1	2	-	1	2
Total	240	100	29	100	1,302	100	720	100	54	100

Question	Disadvantaged N	Disadvantaged %	Handicapped N	Handicapped %	Male N	Male %	Female N	Female %	Minority N	Minority %
9. What is your current salary before deductions?										
Under $5,000	1	1	-	-	16	1	14	3	4	10
$ 5,000 to $ 9,999	63	33	-	-	205	19	244	47	14	34
$10,000 to $14,999	70	37	-	-	405	38	203	39	13	32
$15,000 to $19,999	39	21	-	-	286	27	45	9	6	15
$20,000 to $24,999	12	6	-	-	101	9	11	2	2	5
$25,000 to $29,999	4	2	-	-	37	3	3	1	2	5
$30,000 and over	-	-	-	-	22	2	1	-	-	-
Total	189	100	-	-	1,072	100	521	100	41	100
10. Average salary and hours per week.										
Average salary	$12,654		---		$14,722		$10,582		$11,707	
Average hours	39.80		---		40.84		40.82		40.02	
11. Where are you now employed in relation to where you went to high school?										
Same city or township as school	65	27	9	30	350	26	235	32	23	43
Same county as school	93	38	14	47	512	38	285	39	10	19
Same region of Pennsylvania	47	19	4	13	247	19	139	19	5	9
Elsewhere in Pennsylvania	13	5	-	-	50	4	31	4	6	11
State bordering Pennsylvania	4	2	1	3	45	3	7	1	-	-
Other state or country	23	9	2	7	128	10	39	5	9	17
Total	245	100	30	100	1,332	100	736	100	53	100

Question	Disadvantaged		Handicapped		Male		Female		Minority	
	N	%	N	%	N	%	N	%	N	%
12. Why did you take your current job?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
High earnings	79	5	8	5	432	6	213	6	16	5
Job security	124	2	14	2	650	2	386	2	26	2
Close to home	108	3	3	8	540	3	368	3	16	5
Excellent benefits	85	4	14	2	480	5	280	4	23	3
Like to work	139	1	20	1	838	1	475	1	31	1
Fulfills lifelong ambition	42	7	9	4	259	7	158	7	14	7
Highly qualified	79	5	8	5	481	4	240	5	21	4
Other	34	8	4	7	185	8	91	8	6	8
13. Is your current job related to your field of vocational training?										
Yes	119	48	20	65	727	53	386	51	21	38
No	131	52	11	35	633	47	371	49	35	62
Total	250	100	31	100	1,360	100	757	100	56	100
14. How well did your high school vocational program prepare you for your present job?										
Excellent	27	36	5	24	173	24	110	29	8	36
Good	17	23	11	52	367	51	195	51	10	45
Fair	23	31	5	24	152	21	68	18	3	14
Poor	8	11	-	-	24	3	10	3	1	5
Total	75	100	21	100	716	100	383	100	22	100

Question	Disadvantaged N	Disadvantaged %	Handicapped N	Handicapped %	Male N	Male %	Female N	Female %	Minority N	Minority %
15. What type of additional training did you need for your current job?										
Only an orientation	53	47	12	63	288	42	149	40	7	32
A few days of specialized training	11	10	2	11	100	14	69	18	6	27
Two weeks of specialized training	10	9	-	-	52	8	30	8	2	9
Four weeks of specialized training	9	8	2	11	54	8	39	10	1	5
Extensive training	30	27	3	16	197	29	86	23	6	27
Total	113	100	19	100	691	100	373	100	22	100
16. As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?										
I was better prepared	68	59	14	16	485	68	226	73	14	64
I was less prepared	5	4	-	-	8	1	12	4	2	9
Our preparation was about the same	17	15	73	81	74	10	2	1	-	-
No basis for comparison	26	22	3	3	149	21	69	22	6	27
Total	116	100	90	100	716	100	309	100	22	100
17. What were the reasons for not getting your current job in the field you studied at high school vo-tech?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Tried, but could not find job in field	55	1	6	1	233	1	146	1	23	1
Was not accepted in apprentice program	16	7	2	2	65	8	28	8	5	5
Did not feel sufficiently qualified	21	6	1	5	73	7	50	7	8	4
Decided I did not like type of work	16	7	1	5	101	5	75	4	5	5
Found out that pay was too low	27	3	2	2	84	6	92	3	5	5
Too little opportunity for advancement	27	3	1	5	109	3	74	5	9	3
Better type job came along first	32	2	2	2	193	2	93	2	12	2
Never really planned to do so	7	10	1	5	26	9	23	9	3	8
Too far to travel	9	9	-	-	19	10	20	10	2	9
Other	22	5	-	-	104	4	57	6	2	9

Question	Disadvantaged N	Disadvantaged %	Handicapped N	Handicapped %	Male N	Male %	Female N	Female %	Minority N	Minority %
18. Have you ever held a job in the field for which you were trained?										
Yes	82	46	11	73	412	56	283	53	28	42
No	98	54	4	27	325	44	254	47	39	58
Total	180	100	15	100	737	100	537	100	67	100
19. Why did you leave the field for which you were trained?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Too little advancement opportunities	27	3	2	3	144	3	93	4	9	3
Did not like type of work	15	7	1	8	74	7	60	5	5	6
Low earnings	42	1	2	3	156	2	136	1	7	4
Difficulty with supervisor	10	8	4	1	67	8	37	7	2	10
Poor working conditions	17	6	2	3	78	6	37	7	4	8
Better job came along	26	4	3	2	166	1	96	3	10	1
Advanced or promoted out of field	4	12	-	-	16	10	11	12	2	10
Too much overtime work	6	10	-	-	15	12	19	10	1	12
Personal/family problems	7	9	-	-	16	10	25	9	6	5
Laid off, lack of work	26	4	2	3	126	4	45	6	5	6
Laid off, other reasons	6	10	2	3	29	9	12	11	4	8
Other	32	2	-	-	120	5	105	2	10	1

TABLE 7A

RANK ORDER OF THE TOP 30 OCCUPATIONS
FOR THE DISADVANTAGED

Occupation	Number
Auto Mechanic	16
Machinist	11
Stock Clerk	9
Welder	9
Carpenter	8
Plumber	7
Truck Driver	7
Military Occupations	6
Auto Body Repairer	6
Cosmetologist	5
Clerk	5
Communication Equipment Repairer	4
Cook	4
Draftsperson	4
Electrician	4
Machine Feeder	4
Mechanic	4
Assembler	3
Computer Operator	3
Construction Worker	3
Electrical Technician	3
Food Preparation Worker	3
Nurses Aide	3
Printer	3
Sales Clerk	3
Cashier	3
Dental Assistant	2
Landscape Contractor	2
Production Supervisor	2
Retail Supervisor	2

TABLE 7B

OCCUPATIONS FOR HANDICAPPED

Occupation	Number
Auto Mechanic	4
Carpenter	2
Laborer	2
Mechanic	2
Machinist	2
Nurses Aide	1
Computer Operator	1
Electrician	1
Food Processor Worker	1
Fabricator	1
Hand Packer	1
Inventory Clerk	1
Machine Operator	1
Office Manager	1
Production Line Worker	1
Registered Nurse	1
Truck Driver (Heavy)	1
Truck Driver (Light)	1
Waiter	1
Welder	1

TABLE 7C

RANK ORDER OF THE TOP 30 OCCUPATIONS
FOR MALES AND FEMALES

Male		Female	
Occupation	N	Occupation	N
Auto Mechanic	106	Cosmetologist	74
Carpenter	70	Secretary	57
Welder	57	Nurses Aide	40
Electrician	42	Cashier	34
Electrical Technician	42	Sales Clerk	31
Laborer	37	Computer Operator	28
Draftsperson	37	Dental Assistant	27
Truck Driver	35	Licensed Practical Nurse	22
Auto Body Repairer	32	Power Sewing Operator	22
Printer	30	Registered Nurse	20
Military	27	Waitress	18
Plumber	24	Machine Feeder	16
Mechanic	24	Retail Supervisor	14
Diesel Mechanic	24	Clerk	13
Stock Clerk	19	Designer	13
Assembler	15	Health Aide	11
Heat and Air Condition. Spec.	15	Bookkeeper	11
Sales Clerk	14	Draftsperson	10
Cook	13	Hand Packer	10
Production Supervisor	12	Cook	9
Food Service Manager	12	Food Preparation	9
Retail Supervisor	11	Personnel Supervisor	8
Computer Operator	11	Business Service Sales	7
Machine Feeder	9	Sales Rep	6
Designer	8	Selling Commercial Serv.	6
Electrical Engineer	8	Dietician	5
Painter	8	Accountant	5
Electrical Repairer	8	Receptionist	5
Landscape Contractor	8	Bank Teller	5
Production Inspector	6	Motel Manager	5

TABLE 7D

RANK ORDER OF THE TOP 10 OCCUPATIONS
FOR MINORITIES

Occupation	Number
Cashier	4
Secretary	4
Sales Clerk	3
Nurses Aide	2
Plumber	2
Retail Supervisor	2
Stock Clerk	2
Auto Mechanic	2
Power Sewing Operator	2
Instrument Repairer	2

TABLE 8

COMPLETERS BY PROGRAM FIELD OF STUDY

Question	T & I N	T & I %	Tech. N	Tech. %	Health N	Health %	Ag. N	Ag. %	HE N	HE %	Bus. N	Bus. %	Market. N	Market. %	Totals N	Totals %
3. What is your current employment status?																
Employed	1,250	76	212	71	187	73	72	71	90	76	58	81	128	73	1,997	75
Military	71	4	16	5	2	1	2	2	1	1	-	-	3	2	95	4
Unemployed	206	13	25	8	30	12	14	14	12	10	4	6	21	12	312	12
Unemployed - not looking	117	7	45	15	38	15	14	14	15	13	10	14	24	14	263	10
Total	1,644	100	298	100	257	100	102	100	118	100	72	100	176	100	2,667	100
4. Since leaving high school, what further training have you taken or currently enrolled in? (multiple response)																
Voc. school one year or less	113	6	17	5	39	14	11	11	5	4	2	2	18	10	205	7
Voc. school two-year assoc.	100	6	50	15	25	9	5	5	10	8	6	7	9	5	205	7
Four-year university	84	5	52	16	20	7	3	3	1	1	16	19	14	8	190	7
Apprenticeship	142	8	9	3	5	2	-	-	2	2	-	-	2	1	160	6
On-the-job training	297	17	47	14	33	12	12	12	12	10	14	17	12	7	427	15
CETA program	31	2	6	2	7	3	2	2	5	4	1	1	5	3	57	2
No further training taken	700	40	80	25	92	33	59	57	68	54	27	33	96	53	1,122	39
Other	299	17	64	20	55	20	12	12	22	18	17	20	25	14	494	17

Question	T & I N	T & I %	Tech. N	Tech. %	Health N	Health %	Ag. N	Ag. %	HE N	HE %	Bus. N	Bus. %	Market. N	Market. %	Totals N	Totals %
5. My area or program of study for the training checked in item 4 is/was. . .																
Related	401	51	114	63	91	65	10	33	22	55	22	55	24	39	684	53
Not related	393	49	67	37	48	35	20	67	18	45	18	45	37	61	601	47
Total	794	100	181	100	139	100	30	100	40	100	40	100	61	100	1,285	100
6. What changes would you recommend to improve high school vocational education?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Better counseling before course	379	4	89	4	56	4	22	4	35	4	29	1	50	5	660	4
Better job placement	593	3	107	2	109	2	54	1	59	1	29	1	85	1	1,036	2
Less academic subjects	76	10	13	10	9	10	2	10	2	10	1	10	7	10	110	10
More practical job training	741	1	119	1	123	1	38	3	47	3	27	5	60	3	1,155	1
More emphasis on reading skills	236	6	57	7	26	9	12	7	13	6	26	6	34	6	404	7
More emphasis on writing skills	206	9	56	8	27	8	6	8	7	9	28	3	34	6	362	8
More emphasis on speaking skills	225	7	66	6	41	5	16	6	13	6	28	3	55	4	444	6
Better equipment/facility	293	5	77	5	32	6	17	5	17	5	21	8	33	8	490	5
More co-op programs	614	2	93	3	91	3	53	2	54	2	22	7	81	2	1,009	3
Other	216	8	47	9	30	7	6	8	11	8	12	9	15	9	337	9

Question	T & I		Tech.		Health		Ag.		HE		Bus.		Market.		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
8a. Current related job																
Yes	691	54	123	56	116	62	20	29	39	46	36	64	65	51	1,090	54
No	586	46	98	44	70	38	50	71	46	54	20	36	62	49	932	46
Total	1,277	100	221	100	186	100	70	100	85	100	56	100	127	100	2,022	100
8b. Current job status																
Entry level	1,087	85	184	83	141	76	61	87	71	84	51	91	110	87	1,705	84
Promoted	191	15	37	17	45	24	9	13	14	16	5	9	17	13	318	16
Total	1,278	100	221	100	186	100	70	100	85	100	56	100	127	100	2,023	100
8c. Job status verifiable																
Yes	1,264	99	219	99	185	100	70	100	85	97	56	100	126	99	2,005	99
No	14	1	2	1	-	-	-	-	3	3	-	-	1	1	20	1
Total	1,278	100	221	100	185	100	70	100	88	100	56	100	127	100	2,025	100
9. What is your current salary before deductions?																
Under $5,000	2	-	6	3	1	1	5	8	1	2	1	2	2	2	18	1
$ 5,000 to $ 9,999	249	25	31	17	51	38	32	54	29	47	11	25	46	51	449	28
$10,000 to $14,999	395	39	67	37	58	44	10	17	23	37	24	55	31	34	608	38
$15,000 to $19,999	244	24	39	21	19	14	11	19	5	8	6	14	7	8	331	21
$20,000 to $24,999	76	8	26	14	2	2	1	2	4	6	1	2	2	2	112	7
$25,000 to $29,999	28	3	9	5	1	1	-	-	-	-	1	2	1	1	40	3
$30,000 and over	16	2	5	3	1	1	-	-	-	-	-	-	1	1	23	1
Total	1,010	100	183	100	133	100	59	100	62	100	44	100	90	100	1,581	100

Question	T & I N	T & I %	Tech. N	Tech. %	Health N	Health %	Ag. N	Ag. %	HE N	HE %	Bus. N	Bus. %	Market. N	Market. %	Totals N	Totals %
10. Average salary and hours per week.																
Average salary	$13,801		$15,606		$11,575		$10,224		$11,079		$12,425		$10,673		$13,473	
Average hours	40.52		40.52		39.41		39.68		40.41		39.09		39.38		40.32	
11. Where are you now employed in relation to where you went to high school?																
Same city or township as school	369	28	42	19	59	31	18	24	30	33	22	38	45	35	585	28
Same county as school	509	39	90	40	66	35	34	46	30	33	22	38	46	35	797	39
Same region of Pennsylvania	247	19	41	18	40	21	12	16	17	19	11	19	18	14	386	19
Elsewhere in Pennsylvania	40	3	13	6	13	7	3	4	3	3	2	3	7	5	81	4
State bordering Pennsylvania	36	3	9	4	1	1	1	1	2	2	-	-	3	2	52	3
Other state or country	103	8	29	13	9	5	6	8	8	9	1	2	11	8	167	8
Total	1,304	100	224	100	188	100	74	100	90	100	58	100	130	100	2,068	100
12. Why did you take your current job?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
High earnings	416	6	82	5	55	6	10	8	28	5	18	5	36	6	646	6
Job security	647	2	113	2	110	2	33	3	34	3	30	3	69	2	1,036	2
Close to home	557	3	86	4	96	3	39	1	45	2	26	4	59	3	908	3
Excellent benefits	443	5	103	3	84	4	18	5	29	4	32	1	51	4	760	4
Like to work	837	1	145	1	131	1	34	2	54	1	32	1	80	1	1,313	1
Fulfills lifelong ambition	276	7	38	7	45	7	12	7	11	7	11	7	24	7	417	7
Highly qualified	474	4	79	6	66	5	25	4	22	6	18	5	37	5	721	5
Other	180	8	31	8	20	8	13	6	8	8	9	8	15	8	276	8

Question	T & I N	T & I %	Tech. N	Tech. %	Health N	Health %	Ag. N	Ag. %	HE N	HE %	Bus. N	Bus. %	Market. N	Market. %	Totals N	Totals %
13. Is your current job related to your field of vocational training?																
Yes	707	53	127	56	117	60	19	25	41	45	36	62	66	50	1,113	53
No	635	47	99	44	77	40	56	75	50	55	22	38	65	50	1,004	47
Total	1,342	100	226	100	194	100	75	100	91	100	58	100	131	100	2,117	100
14. How well did your high school vocational program prepare you for your present job?																
Excellent	168	24	35	28	39	34	5	24	9	22	11	31	16	25	283	26
Good	368	53	55	44	56	49	9	43	21	51	21	60	32	51	562	51
Fair	142	20	30	24	18	16	5	24	10	24	3	9	12	19	220	20
Poor	21	3	5	4	2	2	2	10	1	2	-	-	3	5	34	3
Total	699	100	125	100	115	100	21	100	41	100	35	100	63	100	1,099	100
15. What type of additional training did you need for your current job?																
Only an orientation	291	43	39	32	34	30	8	42	23	56	13	37	29	46	437	41
A few days of specialized training	95	14	18	15	16	14	3	16	10	24	6	17	21	33	169	16
Two weeks of specialized training	50	7	9	7	9	8	1	5	1	2	7	20	5	8	82	8
Four weeks of specialized training	59	9	14	11	12	11	1	5	2	5	3	9	2	3	93	9
Extensive training	175	26	43	35	42	37	6	32	5	12	6	17	6	10	283	27
Total	670	100	123	100	113	100	19	100	41	100	35	100	63	100	1,064	100

Question	T & I N	T & I %	Tech. N	Tech. %	Health N	Health %	Ag. N	Ag. %	HE N	HE %	Bus. N	Bus. %	Market. N	Market. %	Totals N	Totals %
16. As a result of your vocational training, how would you rate your preparation in relation to other employees in your work group who did not receive such training?																
I was better prepared	432	62	79	63	89	78	13	68	31	76	25	71	42	67	711	65
I was less prepared	18	3	1	1	-	-	-	-	-	-	1	3	9	14	29	3
Our preparation was about the same	103	15	12	10	10	9	3	16	6	15	4	11	-	-	138	13
No basis for comparison	146	21	33	26	15	13	3	16	4	10	5	14	12	19	218	20
Total	699	100	125	100	114	100	19	100	41	100	35	100	63	100	1,096	100

17. What were the reasons for not getting your current job in the field you studied at high school vo-tech?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Tried, but could not find job in field	228	1	44	1	28	1	31	1	13	3	8	2	27	1	379	1
Was not accepted in apprentice program	55	8	14	6	8	8	3	9	1	9	2	6	10	5	93	8
Did not feel sufficiently qualified	68	7	25	2	11	7	4	6	8	6	2	6	4	7	123	7
Decided I did not like type of work	111	6	16	5	15	5	12	3	12	4	8	2	10	5	176	5
Found out that pay was too low	112	4	7	7	16	4	10	4	14	2	1	10	15	4	177	4
Too little opportunity for advancement	117	3	6	8	20	3	13	2	12	4	2	6	16	3	183	3
Better type job came along first	181	2	24	3	23	2	3	9	16	1	7	4	22	2	286	2
Never really planned to do so	25	9	6	8	6	9	5	5	1	9	4	5	4	7	49	9
Too far to travel	20	10	6	8	1	10	4	6	3	8	21	1	4	7	39	10
Other	112	4	19	4	13	6	4	6	7	7	2	6	4	7	161	6

Question	T & I		Tech.		Health		Ag.		HE		Bus.		Market.		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
18. Have you ever held a job in the field for which you were trained?																
Yes	452	58	44	34	56	49	28	43	45	70	13	37	57	63	695	55
No	323	42	85	66	59	51	37	57	19	30	22	63	34	37	579	45
Total	775	100	129	100	115	100	65	100	64	100	35	100	91	100	1,274	100
19. Why did you leave the field for which you were trained?	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank	N	Rank
Too little advancement opportunities	152	3	15	3	22	3	9	2	15	3	4	2	20	3	237	3
Did not like type of work	88	6	10	6	10	5	1	12	14	4	3	3	8	6	137	6
Low earnings	182	1	18	2	24	2	12	1	23	1	3	3	30	1	292	1
Difficulty with supervisor	66	8	8	8	10	5	5	5	6	8	1	8	8	6	104	8
Poor working conditions	77	7	9	7	9	7	4	8	8	6	-	-	8	6	115	7
Better job came along	169	2	13	4	21	4	9	2	20	2	3	3	27	2	262	2
Advanced or promoted out of field	14	12	-	-	5	8	2	11	3	9	1	8	2	11	27	12
Too much overtime work	21	10	1	11	4	10	3	10	3	9	1	8	2	11	34	11
Personal/family problems	17	11	3	9	5	8	5	5	7	7	2	7	4	10	41	9
Laid off, lack of work	136	4	12	5	2	11	5	5	3	9	3	3	10	5	171	5
Laid off, other reasons	27	9	2	10	1	12	4	8	2	12	-	-	5	9	41	9
Other	131	5	25	1	29	1	9	2	14	4	5	1	12	4	225	4

APPENDIX C

TABLE 9

LABOR FORCE STATUS OF THE CIVILIAN NONINSTITUTIONAL POPULATION 16 YEARS AND OVER
BY SEX, AGE, RACE AND HISPANIC-ORIGIN IN STATE, 1982 ANNUAL AVERAGES
(NUMBERS IN THOUSANDS)

State and Population Group	Civilian Noninstitutional Population	Civilian Labor Force		Employment		Unemployment		
		Number	Percent of Population	Number	Percent of Population	Number	Rate	Error Range of Rates
PENNSYLVANIA								
Total	9,135	5,482	60.0	4,883	53.5	599	10.9	10.4 - 11.5
Men	4,293	3,151	73.4	2,764	64.4	387	12.3	11.6 - 13.0
Women	4,842	2,331	48.1	2,119	43.8	211	9.1	8.3 - 9.8
Both sexes, 16-19 years	800	413	51.6	317	39.6	96	23.3	20.9 - 25.7
White	8,289	5,027	60.6	4,528	54.6	499	9.9	9.4 - 10.5
Men	3,930	2,922	74.4	2,593	66.0	329	11.2	10.5 - 12.0
Women	4,360	2,105	48.3	1,934	44.4	171	8.1	7.3 - 8.9
Both sexes, 16-19 years	701	382	54.6	301	43.0	81	21.2	18.7 - 23.7
Black	797	423	53.1	326	41.0	97	22.8	20.4 - 25.3
Men	341	214	62.6	157	46.0	57	26.5	23.0 - 30.1
Women	456	210	46.0	114	37.2	40	19.1	15.7 - 22.4
Single (Never Married)	2,292	1,519	66.3	1,266	55.2	254	16.7	15.5 - 17.9
Married, Spouse Present	5,340	3,309	62.0	3,038	56.9	271	8.2	7.6 - 8.8
Other Marital Status	1,503	654	43.5	580	38.6	74	11.3	9.7 - 12.8

State and Population Group	Civilian Noninstitutional Population	Civilian Labor Force		Employment		Unemployment		
		Number	Percent of Population	Number	Percent of Population	Number	Rate	Error Range of Rates
Detailed Characteristics:								
Total								
14-15 years	358	61	17.0	53	14.7	8	13.6	8.2 - 19.0
16-19 years	800	413	51.6	317	39.6	96	23.3	20.9 - 25.7
20-24 years	1,019	771	75.6	646	63.4	125	16.2	14.6 - 17.8
25-34 years	1,882	1,487	79.0	1,308	69.5	180	12.1	11.0 - 13.1
35-44 years	1,376	1,096	79.7	1,011	73.5	85	7.8	6.8 - 8.8
45-54 years	1,207	881	73.0	824	68.3	56	6.4	5.3 - 7.4
55-64 years	1,324	682	51.5	633	47.8	49	7.2	5.9 - 8.4
65 years and over	1,528	153	10.0	145	9.5	7	4.8	2.6 - 6.9
Men								
16-19 years	401	214	53.2	158	39.4	56	26.0	22.6 - 29.5
20-24 years	497	400	80.5	317	63.9	82	20.6	18.2 - 23.0
25-34 years	915	865	94.6	743	81.2	122	14.1	12.7 - 15.6
35-44 years	674	639	94.9	586	86.9	54	8.4	7.0 - 9.8
45-54 years	575	520	90.4	484	84.2	36	6.9	5.5 - 8.3
55-64 years	604	415	68.8	383	63.5	32	7.7	6.1 - 9.4
65 years and over	627	97	15.6	92	14.7	5	5.4	2.5 - 8.3

NOTE: This table was retyped from a Bureau of Labor Statistics printout dated 1983.